Galileo Infrared Observations of the Shoemaker Levy 9 G and R Splash Phases.

R.W. Carlson, P.R. Weissman, J. Hui, and M. Segura (JPL, CIT), Th. Encrenaz and P. Drossart (DESPA, Observatoire de Paris-Meudon)

-Galileo's direct view of the impact sites allows a characterization of the fireball and the subsequent splash phase, which occurs when the re-impacting fireball ejects heats the atmosphere and produces infrared continuum and molecular thermal emission. The Near Infrared Mapping Spectrometer observations of the G and R events show a qualitatively similiar temporal evolution, with the splash phases starting six minutes after fireball initiation. For both events, spectra during the splash periods exhibit continuum emission, presumably arising from condensates produced in the plumes. During this same period, methane emission in the 3.2 to 3.5 micron region is seen for both events. Water band emissions at 2.7 and 1.8 microns are strong features in the G splash and their strengths, relative to the methane band and the underlying continua, increase with time. The R splash shows much weaker water bands; their appearance is delayed relative to the G event.

Abstract submitted for DPS [Division for Planetary Sciences] meeting

Date submitted: LPI electronic form version 5/95

Division for Planetary **Sciences Abstract** Form

DPS Category 8 Running # Session 0.00

Oral preferred [X] Poster preferred ❑ Either ☐

Is this your first DPS presentation? Yes ❑ No [X]

Would you be willing to act as Session Chair? Yes [X] No ☐

Is your abstract newsworthy, and if so, would you be willing to prepare a news release and be available for interviews with reporters?

Yes [X] No ☐ Maybe ❑

Paper presented by Robert W. Carlson
Mail Stop 183-601
Jet Propulsion Laboratory
4800 Oak Grove Dr.
Pasadena, CA 91109
Phone: (818) 354-2648
Fax: (818) 393-4605
Email: rcarlson@issac.jpl.nasa.gov

Special instructions: Put with other SL9 papers.

Membership Status (First Author):

DPS-AAS Member ❑ Non-Member ❑

Student Member ❑ Student Non-Member ❑

Sponsor: